DRAFT-REVISION for 6/3/99 workshop Gasoline Rule 350-351, formerly separate rules, Rule 350 AND Rule 351 5/20/99 1ST WEB VERSION

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THE LAST 5 PAGES (SIDES) OF THIS DOCUMENT IS SUPPOSED TO BE ALL OF RULE 351, COMPLETELY STRUCK THROUGH FOR DELETION.

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NOTE THAT SECTIONS 400 & 500 (esp. test methods) WILL BE BETTER ORGANIZED IN A REPLACEMENT DRAFT TO GO ON WEB TUESDAY, MAY 25

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MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS

REGULATION III - CONTROL OF AIR CONTAMINANTS

RULE 350-351
GASOLINE AND VOC-LIQUID STORAGE & TRANSFER AT BULK PLANTS & TERMINALS
alt: BULK STORAGE AND LOADING OF GASOLINE AND ORGANIC LIQUIDS

SECTION 100 - GENERAL

101 PURPOSE: To limit emissions of volatile organic compounds (VOC) from ~~organic liquids under actual~~ the bulk storage ~~conditions.~~ and transfer of gasoline and organic liquids.

~~**102 APPLICABILITY:** This rule is applicable to the transfer and storage of any organic liquid in a bulk plant or bulk terminal stationary storage which is used primarily to fill delivery vessels.~~

102 APPLICABILITY:

102.1 This rule is applicable to the bulk storage *and* transfer of *all* gasoline and to any organic liquid that both contains VOC and has a total vapor pressure, excluding water vapor, of 1.5 pounds per square inch at 108° Fahrenheit. This rule is applicable to such activities at bulk terminals, bulk plants, and chemical storage facilities.

102.*2* NSPS (New Source Performance Standards - Rule 360) and NESHAPs (National Emission Standard for Hazardous Air Pollutants - Rule 370) may also be applicable.

102.*3* Rule 350-*351*, is not applicable to a pressure tank that is designed to operate at pressures exceeding 30 psig without emissions to the atmosphere.

102.*4* *This rule* is not applicable to the storage *or handling* of the following petroleum products, if they are not heated by a heating device: Diesel #1 and Diesel #2 fuels, #1 through #6 heating fuels, Jet A fuel, JP-8 fuel, kerosene, and mineral spirits. This rule is also not applicable to *waste water containing VOC, nor to* acetone or any other non-precursor organic (exempt) compounds.

102.5 *This rule is not applicable to liquids containing 2.0 percent or less VOC [[i.e. having 2.0 percent or less organic compound content that is not* non-precursor organic *compound(s)]].*

SECTION 200 - DEFINITIONS: For the purpose of this rule, the following definitions shall apply:

20 APPROVED BULK-TANK STAGE I VAPOR BALANCE SYSTEM - Any vapor handling system that is approved in writing by the Control Officer and is capable of capturing and holding vaprous VOC displaced during delivery both into and out of a bulk storage tank, ~~with an efficiency specified by the applicable rule and standard~~. Such system uses vapor-tight equipment that collects and returns vapor to the tank or vessel off-loading gasoline or other subject liquid. ~~under a vapor-tight condition.~~

~~**??Needed 20 APPROVED STAGE I VAPOR RECOVERY DEVICE** - Any vapor handling device or subsystem that is part of an overall Stage 1 vapor recovery system that is approved in writing by the Control Officer or is approvable by virtue of being included in the Control Officer's approved-equipment documents.~~

~~**201**~~ **20 BULK PLANT -** Any loading facility at which gasoline and/or other VOC-containing organic liquid~~s~~ with a true vapor pressure of 1.5 psia (77.5 mm Hg) or greater ~~under any actual storage conditions~~ at 108° Fahrenheit ~~are~~ is received from delivery vessels for storage in on-site stationary tanks, ~~and~~ from which such liquid(s) ~~*also are*~~ *is* transferred to delivery vessels. tank both receives, stores, and supplies

~~**202 BULK TANK** - ANY STATIONARY STORAGE TANK SERVING A LOADING RACK WHICH LOADS DELIVERY VESSELS WITH ORGANIC LIQUIDS.~~

20 BULK TANK - Any stationary storage tank serving a loading rack which loads delivery vessels with gasoline or other SVOL *(*any *VOC-containing* liquid having a true vapor pressure at 108° Fahrenheit of 1.5 psia or more*).*

~~**202**~~ **20 BULK TERMINAL -** Any primary distributing loading facility which has ever received in any consecutive 30-day period over 600,000 gallons (2,271,180 l) of gasoline and/or other VOC-containing organic liquid~~s~~ with a true vapor pressure of 1.5 psia (77.5 mm Hg) or greater ~~under actual storage conditions~~ at 108° Fahrenheit, or any loading facility where delivery of gasoline to the facility is primarily by pipeline.

~~**203**~~ **20 DELIVERY VESSEL -** Any vehicular-mounted container such as a railroad tank car, tanker truck, tank trailer, cargo tank, or any other *wheel mounted* mobile container used to transport gasoline or other volatile organic liquid~~s~~*.*

20_ **EMISSION CONTROL SYSTEM (ECS) -** A system, approved in writing by the Control Officer, designed and operated in accordance with good engineering practice to reduce emissions of volatile organic compounds. Such system consists of an emissions collection subsystem and an emissions processing subsystem.

~~206~~[351]20_ **EXCESS ORGANIC LIQUID DRAINAGE -** MORE THAN 10 MILLILITERS *(2 teaspoonsful) escaping from the end of a delivery hose)* ~~(0.34 FLUID OUNCES)~~ PER DISCONNECT, or such escape that makes a wet area on the ground total area greater than 113 square inches, or the perimeter of which would entirely encompass a circle of 12 inches (30.5 cm) diameter. This does not include drainage into a containment receptacle designed for the purpose that minimizes VOC loss.

2__ **FIXED ROOF or CONE ROOF TANK -** A rigid tank, normally manufactured with a flat or slightly pitched conical steel roof completely welded around its perimeter to the cylindrical midsection that forms the tank's side. A *pressure tank or* roofed tank that has an internal floating pan that is equipped with a continuous, primary seal to close the space between the pan eave and the tank wall is not included.

2__ **FLOATING ROOF TANK -** A vapor loss control device consisting of a tank and a pontoon type or a double-deck type floating-roof that rests on and is supported by the surface of the liquid contents. Such roof is equipped with a continuous primary seal to close the space between the roof eave and tank wall,

~~204~~ 2 **GAS TIGHT -** Having no leak of gaseous organic compound(s) exceeding ~~10,000~~ 100 ppm above background when measurements are made using EPA Method 21 with a methane calibration standard.

~~205 **GASOLINE** - Any petroleum distillate, petroleum distillate/alcohol blend, petroleum distillate/organic compound blend, or alcohol having a true vapor pressure of 1.5 psia (77.5 mm Hg) or greater under any actual conditions of storage and handling, and which is used as a fuel for internal combustion engines.~~

20_ GASOLINE - *Any petroleum distillate or blend of petroleum distillate with other combustible liquid(s), such as alcohol, that is used as a fuel for internal combustion engines and has a Reid vapor pressure between 4.0 and 14.7 psi (200 - 760 mm Hg.) as determined by the method(s) described in subsection 502._. Liquefied petroleum gas (LPG) is excluded.*

~~210~~[351] 2__ **GASOLINE DISPENSING OPERATION -** ALL GASOLINE DISPENSING TANKS AND ASSOCIATED EQUIPMENT LOCATED ON ONE OR MORE CONTIGUOUS OR ADJACENT PROPERTIES UNDER THE CONTROL OF THE SAME PERSON OR PERSONS UNDER COMMON CONTROL.

2__ **GASOLINE VAPORS -** Vapors, originating from liquid gasoline, that are usually found in mixture with air. Included are any droplets of liquid gasoline or of gasoline-vapor condensate that are entrained by the vapor.

2__ **INTERNAL FLOATING ROOF TANK -** A tank fully covered by a permanent structure and equipped with an internal floating roof or pan that has a seal around its perimeter and rests on the contained liquid.

2 **LEAK FREE -** Having no organic liquid leak of more than 3 drops per minute from any leak source other than the disconnect operation of liquid fill line and vapor line.

~~206~~ 2 **LOADING FACILITY -** Any operation or facility such as a gasoline storage tank farm, pipeline terminal, bulk plant, loading dock or combination thereof, where organic liquids are transferred for future distribution and ~~or~~ loaded into ~~or out of~~ delivery vessels. Included are all related pollutant-emitting activities which are located on one or more contiguous or adjacent properties, and are under the control of the same person or persons under common control.

2 **NON-PRECURSOR ORGANIC COMPOUND -** Any of the organic compounds which have been designated by the EPA as having negligible photochemical reactivity. EPA designates such compounds as "exempt". A listing of the compounds is found in Rule 100 of these Air Pollution Control Rules and Regulations.

~~207 **ORGANIC LIQUID** - Any organic compound which exists as a liquid under any actual conditions of use, transport or storage.~~

2 **PRESSURE TANK/VESSEL -** A tank designed and made to easily contain higher-pressure liquids so as to prevent any loss to the atmosphere during normal operation.

2 **SIDE FILL PIPE -** A fill pipe that enters a tank's *contents* through the tank's side.

~~208~~ 2 **STATIONARY STORAGE TANK -** Any tank, reservoir or other container used to store, but not transport, organic liquids. Such a tank may have wheels, making it portable, *when empty,* from stationary site to stationary site.

2 **SUBJECT VOLATILE ORGANIC LIQUID (SVOL) -** Any liquid composed of organic compound(s) that have a total vapor pressure at 108°F *(42°C)* of 1.5 psia *(77.5 mm Hg)* or more and which contains more than 2 percent VOC.

~~209 **SUBMERGED FILL PIPE** - Any discharge pipe or nozzle which meets the applicable specification as follows:~~
~~**209.1 Top-Filled Or Bottom-Filled Tanks:** The end of the discharge pipe or nozzle is totally submerged when the liquid level is six inches (15 cm) from the bottom of the tank.~~
~~**209.2 Side-Filled:** The end of the discharge pipe or nozzle is totally submerged when the liquid level is 18 inches (46 cm) from the bottom of the tank.~~

2 **SUBMERGED FILL PIPE -** Any discharge pipe or nozzle the discharge surface of which is always completely submerged ~~under~~ *during* normal tank use.

~~216~~ [351] 2 **SWITCH LOADING -** LOADING DIESEL FUEL INTO A DELIVERY VESSEL WHOSE PREVIOUS LOAD WAS GASOLINE; OR LOADING ANY ~~ORGANIC~~ LIQUID NOT SUBJECT TO THIS RULE INTO A DELIVERY VESSEL WHOSE PREVIOUS LOAD WAS AN ORGANIC LIQUID SUBJECT TO THIS RULE.

2 **TANK CAPACITY -** The maximum volume of liquid a tank is allowed to store while still complying with all applicable rules, including local, state, and Federal rules.

2 **TOP FILL or VERTICAL FILL PIPE -** A fill pipe that is positioned such that it pierces the surface of a tank's liquid contents throughout the working range of the tank.

~~210 **TRUE VAPOR PRESSURE (TVP)** - Absolute vapor pressure of a liquid at its existing temperature of storage and handling.~~

2 **TRUE VAPOR PRESSURE (TVP) -** Absolute vapor pressure of a liquid as determined by the American Society of Testing and Materials (ASTM) Method 2879, most current version.

~~218~~**[351]** ~~**VAPOR COLLECTION/PROCESSING SYSTEM** - A VAPOR LOSS CONTROL DEVICE CONSISTING OF A VAPOR GATHERING SUBSYSTEM CAPABLE OF COLLECTING THE ORGANIC VAPORS AND ORGANIC GASES PLUS A SECOND SUBSYSTEM CAPABLE OF PROCESSING SUCH VAPORS AND GASES, PREVENTING AT LEAST 95 PERCENT OF THE VOLATILE ORGANIC COMPOUNDS ENTERING IT FROM ENTERING THE ATMOSPHERE.~~

2 **VAPOR COLLECTION/PROCESSING SYSTEM -** see EMISSION CONTROL SYSTEM

2 **VAPOR LEAK -** *A condition where an escape of organic vapor is of a concentration that is greater than that which qualifies for vapor tightness.*

~~211~~ 2 **VAPOR LOSS CONTROL DEVICE -** Any piping, hoses, equipment, and devices which are used to collect, store, contain, retain, and/or process organic vapors at a bulk terminal, bulk plant, service station, dispensing tank, or other operation handling gasoline and/or other organic liquids.

2 ***VAPOR TIGHT -*** *A condition in which an organic vapor analyzer (OVA) or a combustible gas detector (CGD) with its probe positioned 1 inch from a potential VOC leak source shows* ***either*** *less than 10,000 ppm when calibrated with methane, or less than 1/5 of the lower explosive limit, when prepared according to the manufacturer and used according to subsection 50?? of this rule.*

~~212 **VAPOR TIGHT** - A condition where no organic vapor leak reaches or exceeds 100 percent of the lower explosive limit at a distance of one inch (2.5 cm) from a leak when measured with a combustible gas detector or an organic vapor analyzer, both calibrated with propane.~~

2 **VOLATILE ORGANIC COMPOUND (VOC) -** Any organic compound that participates in photochemical reactions, except non-precursor organic compounds.

~~2 **VOLATILE ORGANIC LIQUID** - Any liquid principally composed of organic compounds and containing at least 2 percent VOC.~~

SECTION 300 - STANDARDS:

~~301 **ALL STORAGE TANKS GREATER THAN 250 GALLONS (946 L):** No person shall install or use a stationary storage tank with a capacity greater than 250 gallons (946 l) for storing organic liquids with a true vapor pressure of 1.5 psia (77.5 mm Hg) or more unless such a tank meets the following requirements:~~

~~**301.1** The tank has a submerged fill pipe; and~~

~~**301.2** The tank has a pressure/vacuum valve which is set within ten percent of the tank's maximum, safe~~

~~working pressure.~~

301 BULK TANK *EQUIPMENT* REQUIREMENTS:

301.1 Fill-pipes on Tanks Greater Than 250 Gallons (946 L): No person shall install or use a stationary BULK storage tank with a capacity greater than 250 gallons for storing gasoline or SVOL with a ~~true~~ total vapor pressure of 1.5 psia (77.5 mm Hg) or more *at 108° F (42 °C)* unless the tank has a submerged fill pipe that meets the following requirements:

***a.* Side mounted fill-pipe:**

***(1)* Tanks less than 40,000 gallons:** The part of the opening most vertically distant from the bottom shall not exceed 18 inches.

***(2)* Tanks of 40,000 gal. and more:** The opening shall always be completely submerged except when the tank is drained for cleaning, maintenance, or moving, or when the tank is served by an Emission Control System (ECS).

***b.* Top or vertically Mounted Fill Pipe:** The part of the opening most vertically distant from the bottom shall not exceed 6 inches.

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***301.2 Pressure-vacuum Valves on* Fixed Roof *Bulk* Tanks >250 Gallons (946 L):** *A fixed roof* tank *greater than 250 gallons* shall have a pressure/vacuum valve which is set at no less than 1/2 psig for both pressure and vacuum, except for a tank that is *equipped with ~~,~~an Emission Control System (* ECS).

~~**302 GASOLINE STORAGE TANKS BETWEEN 250AND 40,000 GALLONS (946151,400 L):** No person shall store gasoline in a stationary storage tank with a capacity less than 40,000 gallons (151,400 l) but greater than 250 gallons (946 l) unless the tank is equipped with a vapor recovery system which collects and returns displaced vapors to the delivery vessel using vapor tight fittings and lines; or such tank uses at least one of the vapor loss control methods in Sections 306, 307, or 308 of this rule.~~

301.3 Gasoline Storage Tanks Between 250 ~~And~~ *&* 40,000 Gallons (946-151,400 L): No person shall store gasoline in a bulk storage tank with a capacity less than 40,000 gallons (151,400 l) but greater than 250 gallons (946 l) unless the tank *is served only by delivery vessels bearing a valid Maricopa County decal* and completely satisfies an applicable emission control alternative as follows:

a. Bulk Plant: *A bulk-plant tank shall be* equipped with an approved bulk-tank Stage 1 vapor recovery/balance system; or *with the applicable alternative(s) that follow.*

b Bulk Terminal Requirements and Bulk Plant Option: *A bulk-terminal tank shall be located at a terminal the loading racks of which are all served*

by (an) ECS(s) meeting the requirements in subsection **301.3c** following, and:

(1) the tank shall have a floating roof**; or**

(2) the tank shall be served by an ECS that controls VOC emission at least as efficiently as an internal floating roof which meets NSPS subpart Kb (as referenced in Rule 360).

c. Efficiencies Required for An ECS:

(1) Bulk Terminal: *An* EMISSION CONTROL SYSTEM THAT SERVES *A BULK TERMINAL'S GASOLINE LOADING OPERATION SHALL EMIT* NOT MORE THAN .08 POUNDS VOC PER 1000 GALLONS (10 G/1000 L) OF SUCH LIQUIDS TRANSFERRED).

(2) Bulk Plant: *An* ECS that serves a bulk plant's gasoline transfer operations shall EMITS TO ATMOSPHERE LESS THAN 0.6 POUND OF VOLATILE ORGANIC COMPOUNDS PER 1000 GALLONS TRANSFERRED (72 GRAMS PER 1000 LITERS).

~~**303 ORGANIC LIQUID STORAGE TANKS OF 20,000 THROUGH 39,999 GALLONS CAPACITY (75,700 - 151,396 L):** No person shall store organic liquids with a true vapor pressure (TVP) of 1.5 through 11.0 psia (77.5 - 569 mm Hg) in a stationary tank with a capacity from 20,000 through 39,999 gallons (75,700 - 151,396 l) unless the tank is equipped with a vapor recovery system which collects and returns displaced vapors to the delivery vessel using vapor-tight fittings and lines; or such tank uses at least one of the vapor loss control methods specified in Sections 306, 307, or 308 of this rule.~~

301.4 SVOL STORAGE TANKS OF 20,000 THROUGH 39,999 GALLONS CAPACITY (75,700 - 151,396 L): No person shall store non-gasoline SVOLs in a stationary tank with a capacity from 20,000 through 39,999 gallons (75,700 - 151,396 l) unless the tank is:

a. equipped with *a floating roof; or*

b. *has* an approved bulk-tank Stage 1 vapor recovery/balance system *served only by delivery vessels that are certified in accordance with Rule 352,* ***or***

c. *the tank is served by an ECS meeting the applicable requirements of subsection 301.3c.*

~~**304 STORAGE TANKS OF 40,000 GALLONS (151,400 L) OR MORE:** No person shall place, store or hold in any stationary storage tank having a capacity of 40,000 gallons (151,400 L) or more, any gasoline or organic liquid having a true vapor pressure of 1.5 psia (77.5 mm Hg) or greater under actual storage conditions, unless such storage tank is equipped with at least one of the vapor loss control devices specified in Sections 306, 307, or 308 of this rule, .~~

301.5 Storage Tanks Of 40,000 Gallons (151,400 L) Or More: No person shall place, store or hold in any bulk storage tank having a capacity of 40,000 gallons (151,400 L) or more, any gasoline or other SVOL unless the tank is

equipped *pursuant to both the applicable tank emission-control requirements in subsection 301.3b and has all SVOL loading racks served by ECS pursuant to subsection 301.3c.*

~~305 TANKS STORING LIQUIDS HAVING VAPOR PRESSURES EXCEEDING 11 PSIA: No person shall place, store, or hold in a stationary tank having a capacity over 250 gallons (946 l) organic liquid(s) with a true vapor pressure above 11.0 psia (569 mm Hg) unless such a tank is either a pressure tank maintaining working pressure sufficient at all times to prevent organic vapor/gas loss to the atmosphere or is equipped with a vapor collection/processing system specified in Section 308 of this rule.~~

301.6 Tanks *of 40,000 Gallons or Greater Capacity* Storing SVOLs With a VP of 11 Psia - 14.7 Psia, or More:

a. No person shall place, store, or hold in a bulk tank of 40,000 gallons capacity or greater, gasoline or other volatile organic liquid between 11.0 psia (569 mm Hg) *and 14.7 psia* unless such a tank is either a pressure tank or is equipped with an Emission Control System pursuant to subsection 301.2b(2) of this rule.

b. *Tanks greater than 250 Gallons Storing SVOLs with a VP Greater Than 14.7 Psia:* No person shall place, store, or hold in a bulk tank volatile organic liquid with a true vapor pressure above 14.7 psia (mm Hg) unless such a tank is a pressure tank.

~~306~~ **301.7 EXTERNAL FLOATING ROOF ~~STORAGE~~ TANK~~S~~ REQUIREMENTS:** ~~This vapor loss control device is an uncovered floating roof consisting of either a pontoon type or a double deck type roof. It must rest on and be supported by the surface of the liquid contents, be equipped with a continuous primary seal to close the space between the roof eave and tank wall, except as provided in subsection 309.1~~ and An external floating roof tank shall have a continuous secondary seal which is of a design that is in accordance with accepted standards of the petroleum industry. The secondary seal shall meet the following requirements:

~~306.1~~ **a. Secondary Seal Configurations:**

(1) The secondary seal is ~~to be installed above~~ mounted above the primary seal so that it completely covers the space between the roof edge or primary seal and the tank wall, ~~except as provided in subsection 306.2 of this rule.~~

(2) Storage tanks constructed after July 13, 1988, shall have a secondary seal that is rim-mounted. ~~Except for tanks having metallic shoe primary seals onto which secondary seals were installed prior to July 13, 1988, by October 6, 1993 no person shall operate an external floating roof tank subject to the provisions of this rule unless a~~

(3) A secondary seal shall extend~~s~~ from the roof to the tank shell (a rim-mounted seal) and ~~is~~ not be attached to the primary seal.

~~306.2~~ **b. Allowable Seal Gap Area:**

(1) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 1.0 square inch per foot (21.2 cm^2 per meter) of tank diameter.

(2) The width of any portion of any gap shall not exceed 1/2 inch (1.27 cm).

(3) Determinations of gap area shall only be made at the point(s) where the gaps exceed 1/8 inch (3 mm).

~~**306.3** The owner or operator is exempted from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal.~~

~~**307**~~ **301.8 INTERNAL FLOATING ROOF TANKS ~~WITH FIXED COVERING~~:** ~~This vapor loss control device is a covered tank with an internal floating roof resting on the contained liquid. This tank and its appurtenances shall meet the applicable requirements as follows:~~

An internal floating roof tank (and its appurtenances) that is not subject to ~~subsection 307.1 must~~ Part Kb of the NSPS shall comply with one of the following:

~~**307.1** Bulk terminal tanks for which construction, reconstruction or modification commenced after July 23, 1984, must comply with all applicable requirements of the EPA New Source Performance Standard (NSPS), 40 CFR Part 60, Subpart Kb.~~

~~**307.2** All tanks not subject to subsection 307.1 must comply with one of the following:~~

a. Comply with 40 CFR Part 60, Subpart Kb, notwithstanding the type of facility and the date of tank construction, reconstruction or modification; or

b. Have at least one continuous seal which completely covers the space between the roof/pan edge and tank wall, except as provided in subsection 309.1, and meet at least one of the following requirements:

(1) Have a contact-type roof resting completely on the liquid surface.

(2) Have a liquid mounted seal.

(3) Have two seals, a primary and a secondary.

~~**308** **VAPOR COLLECTION/PROCESSING SYSTEM:** This vapor loss control device consists of a vapor gathering subsystem capable of collecting the organic vapors and organic gases plus a second subsystem capable of processing such vapors and gases, preventing at least 95 percent by weight of the volatile organic compounds entering it from escaping to the atmosphere.~~

301.9 EMISSION CONTROL SYSTEM (ECS) REQUIREMENTS

~~**308.1**~~ **a.** The vapor processing subsystem *of an ECS pursuant to subsection 301.3b and 301.3c* shall be gas-tight except for the designated exhaust.

~~**308.2**~~ **b.** Any tank gauging or sampling device on a tank, vented to such an Emission Control System ~~vapor collection/processing system~~, shall be

equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling procedures.

~~308.3~~ **c.** **All** pressure-vacuum valves *of an ECS* shall be constructed and maintained in a gas tight condition except when the operating pressure exceeds the valve release setting.

d. The operator of loading racks at a bulk terminal shall be responsible to provide means for the Control Officer to use a pressure gauge conforming to the requirements of the testing procedure for vapor tightness pursuant to this rule, subsection 503.6 without altering standard loading parameters such as flowrate.

301.10 Purging Tanks: For any tank larger than 50,000 gallons, and any material having a Reid vapor pressure exceeding 1.4 psia, the tank must be purged of vapor through a control device having an overall control of no less than 90%. Exception for November through February for material whose Reid vapor pressure is less than 2.0.

~~309~~ **301.11 Additional Requirements:**

~~309.1~~ **a.** **Prohibition - Floating Roof Openings:** Floating roof tanks subject to the provisions of ~~Section 306 or 307~~ subsection 301.8 or subsection 301.7 of this rule shall have no visible holes, tears or other openings in the seal or in any seal fabric. [[A hole is not a gap and vice-versa.]]

(1) The accumulated area of gaps between a tank's wall and primary seal shall not exceed 10 square inches per foot of tank diameter (212 cm^2 per meter) and the width of any portion of any gap shall not exceed 1½ inches (3.8 cm).

(2) Covers, Seals, & Lids:

(A) ~~Where applicable~~, all openings except drains shall be equipped with a cover, seal, or lid. This includes any orifice in a floating roof through which the anti-drift pole is mounted.

(B) The cover, seal or lid shall be in a closed position at all times, except temporarily during those periods when the correct operation of the floating roof requires that such closures be opened .~~device is in actual use.~~

(3) Vents:

(a) Automatic bleeder vents shall be closed at all times, except when the roof is floated off or landed on the roof leg supports.

(b) Rim vents, if provided, shall be set to open only when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

~~309.2~~ **b.** Tanks and all required emission control equipment shall be properly installed, properly maintained and be properly operating.

30~~2~~1 **OTHER GENERAL REQUIREMENTS FOR LOADING FACILITIES:** ALL BULK TERMINALS AND PLANTS MUST ~~HAVE SUBMERGED FILL PIPES IN ALL TANKS OVER 250 GALLONS (946 L) STORING ORGANIC LIQUIDS,~~ OBSERVE DESIGNATED PROCEDURES AND BE EQUIPPED WITH APPLICABLE EQUIPMENT AS FOLLOWS:

~~301.1~~ 30~~2~~.1 **Bulk Terminals:** ~~NO PERSON SHALL LOAD ORGANIC LIQUIDS HAVING A TVP OF 1.5 PSIA (77.5 MM HG) OR GREATER INTO ANY DELIVERY VESSEL FROM A STATIONARY STORAGE TANK AT A BULK TERMINAL UNLESS THE VESSEL BEARS A CURRENT PRESSURE-TEST DECAL ISSUED BY THE CONTROL OFFICER AND THE TERMINAL USES A VAPOR COLLECTION/PROCESSING SYSTEM WHICH REDUCES THE EMISSIONS OF VOLATILE ORGANIC COMPOUNDS TO NOT MORE THAN .08 POUNDS PER 1000 GALLONS OF SUCH LIQUIDS TRANSFERRED (10 GRAMS PER 1000 LITERS).~~

a. SWITCH LOADING SHALL BE SUBJECT TO ~~THIS~~ THE STANDARD IN SUBSECTION 301.3C.

b. THE TERMINAL OWNER OR OPERATOR AND THE OPERATOR OF THE RECEIVING DELIVERY VESSEL SHALL ACT TO ENSURE THAT THE VAPOR LINE IS CONNECTED BEFORE SUCH LIQUIDS ARE TRANSFERRED.

~~301.2 30.2 Bulk Plant Tanks Over 250 Gallons (>946 L):~~

~~. Transfer To Bulk Plant Tanks: NO PERSON SHALL TRANSFER GASOLINE FROM A DELIVERY VESSEL INTO A BULK PLANT TANK EXCEEDING 250 GALLONS (946 L) CAPACITY UNLESS THE DELIVERY VESSEL BEARS A CURRENT COUNTY PRESSURE-TEST DECAL and uses A VAPOR BALANCE SYSTEM EQUIPPED WITH FITTINGS WHICH ARE VAPOR TIGHT; OR, ALTERNATIVELY, A VAPOR LOSS CONTROL SYSTEM IS USED WHICH EMITS TO ATMOSPHERE LESS THAN 0.6 POUND OF VOLATILE ORGANIC COMPOUNDS PER 1000 GALLONS TRANSFERRED (72 GRAMS PER 1000 LITERS).~~

30~~3~~2 **OPERATING REQUIREMENTS FOR VAPOR LOSS CONTROL DEVICES:** THE OWNER OR OPERATOR OF A VAPOR LOSS CONTROL DEVICE SUBJECT TO THIS RULE SHALL OPERATE THE DEVICE AND ~~ORGANIC LIQUID~~ SVOL TRANSFER EQUIPMENT AS FOLLOWS:

~~302.1~~ 30~~3~~.1 LOADING SHALL BE ACCOMPLISHED IN A MANNER THAT PREVENTS GAUGE PRESSURE FROM EXCEEDING 18 INCHES OF WATER (33.6 MM HG) AND VACUUM FROM EXCEEDING ~~SIX~~ *6* INCHES OF WATER (11.2 MM HG) IN THE TANK TRUCK. EACH OWNER OR OPERATOR OF A FACILITY SHALL ACT TO ENSURE THAT ANY VAPOR RECOVERY SYSTEM REQUIRED BY THIS ~~RULE 351~~ *rule* IS CONNECTED BETWEEN THE

DELIVERY VESSEL AND THE STORAGE TANK DURING ALL gasoline and applicable SVOL ~~ORGANIC LIQUID~~ TRANSFERS.

~~302.2~~ 303.2 LOADING SHALL BE ACCOMPLISHED IN A MANNER THAT PREVENTS OVERFILLS, FUGITIVE LIQUID LEAKS OR EXCESS ~~ORGANIC LIQUID~~ gasoline/SVOL DRAINAGE. OWNERS OR OPERATORS OF BULK PLANTS OR OPERATORS OF DELIVERY VESSELS SHALL OBSERVE ALL PARTS OF THE TRANSFER AND SHALL DISCONTINUE TRANSFER IF ANY LEAKS ARE OBSERVED. MEASURES SHALL BE TAKEN TO PREVENT LIQUID LEAKS FROM THE LOADING DEVICE WHEN IT IS NOT IN USE, AND TO COMPLETE DRAINAGE BEFORE THE LOADING DEVICE IS DISCONNECTED. DURING LOADING OR UNLOADING OPERATIONS, POTENTIAL LEAK SOURCES SHALL BE VAPOR TIGHT AS DEMONSTRATED BY THE TEST PROCEDURE DESCRIBED IN SECTION ~~501~~ 502 OF THIS RULE.

~~302.3~~ 303.3 LOADING OPERATIONS WHICH USE VAPOR COLLECTION/PROCESSING EQUIPMENT SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT THE DISPLACED VAPOR AND AIR WILL BE VENTED ONLY TO THE VAPOR COLLECTION/PROCESSING SYSTEM, WHICH SHALL BE OPERATED GAS-TIGHT AND IN A MANNER SUCH THAT THE VAPOR PROCESSING CAPACITY IS NOT EXCEEDED. DIAPHRAGMS USED IN VAPOR STORAGE TANKS SHALL BE MAINTAINED GAS-TIGHT.

~~302.4~~ 303.4 VAPOR TRANSFER LINES SHALL BE EQUIPPED WITH FITTINGS THAT ARE VAPOR TIGHT AND THAT AUTOMATICALLY AND IMMEDIATELY CLOSE UPON DISCONNECTION. VAPOR BALANCE SYSTEMS SHALL BE DESIGNED TO PREVENT ANY VAPORS COLLECTED AT ONE LOADING RACK FROM PASSING TO ANOTHER LOADING RACK.

~~303~~ 304 REPAIR AND RETESTING REQUIREMENT: EXCEPT AS SUPERSEDED BY DIVISION ACTIONS PURSUANT TO THE PROCEDURES OF RULE 100, SECTION 501 ("MALFUNCTIONS"), THE OWNER/OPERATOR OF A VAPOR LOSS CONTROL DEVICE THAT EXCEEDS THE STANDARDS OF THIS RULE SHALL NOTIFY THE CONTROL OFFICER AND OBSERVE THE FOLLOWING TIME SCHEDULE IN ~~ENDING~~ correcting SUCH EXCEEDANCES:

~~303.1~~ 304.1 CONCENTRATIONS AT OR ABOVE THE LOWER EXPLOSIVE LIMIT (*or* 50,000 ppmv as methane) MUST BE BROUGHT INTO COMPLIANCE WITHIN 24 HOURS OF DETECTION.

~~303.2~~ 304.2 ~~LEAK~~ ESCAPE CONCENTRATIONS ~~EXCEEDING 10,000 PPM BUT~~ LESS THAN 50,000 PPM AS METHANE *BUT VIOLATING AN APPLICABLE GAS-TIGHT OR VAPOR-TIGHT STANDARD* FOR VAPOR COLLECTION/PROCESSING ~~EQUIPMENT SUBJECT TO GAS-TIGHT STANDARD~~ SHALL BE BROUGHT INTO COMPLIANCE WITHIN ~~5~~ 3 DAYS OF DETECTION.

~~303.3~~ 304.3 EXCEPT AS THE CONTROL OFFICER OTHERWISE SPECIFIES, A LEAK SOURCE SUBJECT TO SECTIONS ~~303.1~~ *304.1* OR ~~303.2~~ *304.2* MUST BE TESTED AFTER PRESUMED LEAK-CORRECTION WITHIN 15 MINUTES OF RECOMMENCING USE; IF LEAK STANDARDS ARE EXCEEDED IN THIS TEST, THE USE OF THE FAULTY EQUIPMENT SHALL BE DISCONTINUED WITHIN 15 MINUTES UNTIL CORRECTION IS VERIFIED BY RETESTING.

~~304~~ 305 LOADING EQUIPMENT MAINTENANCE AND OPERATING PRACTICES: ALL EQUIPMENT ASSOCIATED WITH DELIVERY AND LOADING OPERATIONS SHALL BE MAINTAINED TO

BE LEAK FREE, VAPOR TIGHT AND IN GOOD WORKING ORDER. GASOLINE SHALL NOT BE SPILLED, DISCARDED IN SEWERS, STORED IN OPEN CONTAINERS, OR HANDLED IN ANY OTHER MANNER THAT WOULD RESULT IN EVAPORATION TO THE ATMOSPHERE. PURGING OF GASOLINE VAPORS AND OF JP-4 (JET PETROL) VAPORS IS PROHIBITED.

~~310~~ 306 EXEMPTIONS:

~~310.1 A pressure tank maintaining working pressure sufficient at all times to prevent organic vapor or gas loss to the atmosphere is exempt from Sections 301, 302, 303, and 304 of this rule.~~

306.1 The owner or operator is exempted from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal of an external floating roof.

~~310.2~~ 306.2 During the following periods a floating roof is exempt from the requirement that its roof be floating: when the tank is being drained completely and when it is being filled, as long as both processes are accomplished continuously and as rapidly as practicable.

306.3 Bulk tank vacuum valve requirement: For bulk tanks manufactured before [date: 6 months after adoption of this rule revision] that are not designed to safely maintain a vacuum of at least 1/2 psig, the vacuum valve setting shall be at least half of the maximum design vacuum pressure.

~~310.3 A horizontal filling nozzle at its highest point within a floating roof tank exceeding 2,000,000 gallons (7,580,000 l) capacity may be up to 39.4 inches (1 meter) above the tank bottom if: except when the tank is emptied completely, the nozzle is kept completely submerged, including when the roof rests on its legs.~~

~~305.2~~[rule 351] **306.4 OPENING HATCHES:** WHEN VOC VAPORS FROM ~~ORGANIC LIQUIDS~~ gasoline or other SVOL ARE PRESENT WITHIN A NON-EXEMPT DELIVERY VESSEL, AUTHORIZED GOVERNMENT AGENTS AS WELL AS OWNERS/OPERATORS AND THEIR CONTRACTORS MAY OPEN VAPOR CONTAINMENT EQUIPMENT WHILE PERFORMING OPERATIONS REQUIRED BY DIVISION RULES OR BY OTHER STATUTORY ENTITIES, BUT SHALL BE RESTRICTED AS FOLLOWS UNLESS APPROVED IN ADVANCE BY THE CONTROL OFFICER:

a. WAIT AT LEAST 3 MINUTES AFTER ONLOADING IS COMPLETE OR DELIVERY VESSEL HAS STOPPED BEFORE OPENING HATCH OR OTHER VAPOR SEAL.

b. RECLOSE HATCH OR OTHER SEALING DEVICE WITHIN 3 MINUTES OF OPENING.

c. LIMIT WINDSPEED AT OPENED HATCH OR OTHER OPENED SEALING DEVICE TO NOT MORE THAN 3 MPH (1.34 M/SEC), using a barrier if necessary.

SECTION 400 - ADMINISTRATIVE REQUIREMENTS

401 ANNUAL INSPECTIONS OF EXTERNAL FLOATING ROOF TANKS: The owner or operator of any tank which uses an external floating roof to meet the vapor loss control

requirements of this rule shall make the primary seal envelope and the secondary seal available for unobstructed inspection by the Control Officer on an annual basis. The primary seal envelope shall be made available for inspection at a minimum of four locations selected along its circumference at random by the Control Officer. If the Control Officer detects a violation as a result of any such inspection, the Control Officer may require such further unobstructed inspection of the seals as may be necessary to determine the seal condition for its entire circumference.

402 ANNUAL INSPECTIONS OF INTERNAL FLOATING ROOF TANKS: The owner or operator of any tank which uses an internal floating roof to meet the vapor loss control requirements of this rule shall make the entire tank including the internal floating roof available for inspection prior to filling. It shall be made available for visual inspection through the manholes or roof hatches on the fixed covering on an annual basis. The operator shall annually test for vapor leakage with a vapor detector, calibrated with methane and suspended and moved within 2 feet of *a point on the* perimeter of the roof/pan. Or an equivalently effective method shall be used that is approved in writing by the Control Officer. The Control Officer shall be notified in writing of readings of 10,000 ppmv or greater, and repairs shall be made such that there is no vapor concentration reading higher than 500 ppmv when tested within a week of completion of repairs. ~~Roofs which practicably can be walked on shall annually be made available for hands-on inspection.~~

403 FIVE-YEAR, FULL CIRCUMFERENCE INSPECTIONS: As of July 13, 1988, the owner or operator of an external floating roof tank of 20,000 gallons (75,700 l) or more storing an SVOL ~~organic liquid with a TVP of 1.5 psia (77.5 mm Hg) or greater~~ shall make the primary seal envelope available for inspection by the Control Officer for its full length every five years. However, if prior thereto the secondary seal is removed or if the tank is drained and cleaned by the owner or operator for any reason, it shall be made available for such inspection at that time. The owner or operator shall provide notification to the Control Officer no less than ~~seven~~ 7 working days prior to removal of the secondary seal. The owner or operator shall perform a complete inspection of the primary seal and floating roof, including measurement of gap area and maximum gap, whenever the tank is emptied for non-operational reasons or at least every ~~five~~ 5 years, whichever is more frequent.

404 SEMI-ANNUAL INSPECTIONS BY OWNER OR OPERATOR: The owner or operator of any floating roof tank subject to this rule shall inspect the tank and seals at least once every ~~six~~ *6* months to determine ongoing compliance with both the applicable standards of this rule and any permit conditions pertaining to the tank. Determinations of secondary seal gap area on external floating roofs need be made only once per year. Records of these inspections shall be maintained and shall be made available to the Control Officer upon request.

~~**405 COMPLIANCE SCHEDULE:** By October 6, 1992, any person subject to Section 300 who does not comply with all its provisions shall submit to the Control Officer for approval an emission control plan describing the method(s) to be used to achieve full compliance by October 6, 1993. This plan shall specify dates for completing increments of progress, such as the contractual arrival date of new control equipment. The Control~~

~~Officer may require a person submitting such an emission control plan to submit subsequent reports on progress in achieving compliance.~~

~~401~~ 405 ~~EQUIPMENT~~ LEAKS FROM STORAGE AND TRANSFER EQUIPMENT: The Control Officer, at any time may monitor a storage system, a delivery vessel vapor collection system, a loading rack's vapor loss control devices, a loading facility or a vapor collection/processing system for vapor leaks by the methods described in subsection 50 of this rule or by applicable EPA Reference Methods specified in subsection 50 .

~~401.1~~ 405.1 MONTHLY INSPECTION: THE OWNER OR OPERATOR SHALL ALSO PERFORM MONTHLY INSPECTIONS, WHILE VAPOR IS BEING TRANSFERRED, FOR LIQUID AND VAPOR LEAKS AND FOR FAULTY EQUIPMENT. IN THESE MONTHLY INSPECTIONS DETECTION METHODS INCORPORATING SIGHT, SOUND, SMELL AND/OR TOUCH MAY BE USED.

~~401.2~~ 405.2 LOG BOOK: A LOG BOOK SHALL BE USED AND SHALL BE SIGNED BY THE OWNER OR OPERATOR AT THE COMPLETION OF EACH MONTHLY INSPECTION FOR EQUIPMENT LEAKS. A SECTION OF THE LOG SHALL CONTAIN A LIST, SUMMARY DESCRIPTION, OR DIAGRAM(S) SHOWING THE LOCATION OF ALL EQUIPMENT IN GASOLINE SERVICE AT THE FACILITY.

~~401.3~~ 405.3 ANNUAL ECS INSPECTION WITH DEVICE: LEAK DETECTION TESTS SHALL BE CONDUCTED ANNUALLY during June, July, or August BY THE OWNER OF EACH ECS equipped BULK LOADING FACILITY, OR BY A CONSULTANT, AT THE EXPENSE OF THE OWNER. TESTING SHALL BE DONE ACCORDING TO PROCEDURES IN SECTION ~~501~~ *~~subsection 503.??~~*, EXCEPT THAT EPA METHOD 21 SHALL BE USED TO TEST FOR LEAKS FROM A VAPOR COLLECTION/ PROCESSING UNIT AND ITS ASSOCIATED PIPING OUTSIDE THE LOADING AREA. EQUIPMENT SHALL CONFORM TO THE SPECIFICATIONS OF THOSE TEST METHODS CITED IN SECTION ~~504.2~~ 502. PRIOR TO TESTING, THE OWNER SHALL NOTIFY THE CONTROL OFFICER OF THE DATE, TIME AND LOCATION OF THE TESTING. THE CONTROL OFFICER OR HIS REPRESENTATIVES SHALL AT THEIR DISCRETION OBSERVE THE TESTS.

~~**402 COMPLIANCE SCHEDULE:** BY SEPTEMBER 30, 1995, THE OWNER OR OPERATOR OF ANY LOADING FACILITY WHICH REQUIRES MODIFICATION SUBJECT TO A REQUIREMENT OF SECTION 300 OF THIS RULE SHALL SUBMIT TO THE CONTROL OFFICER FOR APPROVAL AN EMISSION CONTROL PLAN AND A SCHEDULE FOR ACHIEVING COMPLIANCE WITH ALL REQUIREMENTS BY APRIL 30, 1996. THE PLAN SHALL SPECIFY THE DATE OF COMPLETION OF EACH MAJOR STEP LEADING TO COMPLIANCE.~~

405.4 Vapor Source Disclosure: Upon request by the Control Officer or the operator of a terminal or bulk plant, a driver/operator of a gasoline transport vehicle shall reveal their name, the name and location of the dispensing station to which the vehicle-tank made its most recent delivery, including the type of product(s) delivered, and the name of the person who made that previous delivery.

405.5 Leakage Assessment: The leak status of vapors from liquids containing both VOC and non-VOC organic components shall be judged as if the leak were entirely a VOC.

For example, a vapor leak from a solution of acetone and gasoline that shows a concentration above the allowable threshold is an exceedance.

SECTION 500 - RECORDKEEPING, MONITORING, ~~AND~~TESTING, ~~RECORDS~~ AND REPORTING: Any person subject to this Rule 350-351, shall comply with the requirements of subsections 50__ and 50__ that follow. Records shall be retained for 5 years and shall be made available to the Control Officer upon request.

501 VAPOR PRESSURE RECORDS: A person whose tanks are subject to the provisions of this rule shall keep accurate records of liquids stored in such tanks including either the true or the Reid vapor pressure ranges of each such liquid. The temperature of the contents of each affected tank located at bulk terminals shall be recorded at least weekly and the true (or Reid) vapor pressure of each shall be recorded at least once each month. ~~These records shall be kept a minimum of three years~~.

~~504~~ 502 COMPLIANCE DETERMINATION ~~- TEST METHODS~~ AND COMPLIANCE INSPECTIONS: When more than one test method is permitted for a determination, an exceedance of the limits established in this rule determined by any of the applicable test methods constitutes a violation of this rule. The Control Officer, at any time, may monitor a delivery vessel vapor collection system, a loading rack's vapor loss control devices, a loading facility or a vapor collection/processing system for vapor leaks by the methods described in subsection 503.6 of this rule or by applicable EPA Reference Methods specified in Section 503.

~~**502.1 Determination Of Vapor-Tight Condition:** Applicable procedures of Rule 351, Section 501.~~
~~**502.2 Emission Rates And Control Device Efficiency:** EPA Reference Methods 2A, 2B, 18 and 25A.~~
~~**502.3 Gaseous Leak Detection And Determination Of Gas-Tight Condition:** EPA Method 21.~~
~~**502.4 Reid Vapor Pressure:** Reid vapor pressure shall be determined by ASTM Method D323-82 or by ASTM Method D-5191.~~
~~**502.5 True Vapor Pressure:** True vapor pressure shall be determined by ASTM Method 2879-83 and by temperature measurement under actual conditions using an instrument accurate to within ± 1 degree Fahrenheit or ± 0.5 degree Celsius. For purposes of recording and reporting, the Reid vapor pressure and the foregoing temperature determination may be used in conjunction with the method of American Petroleum Institute Bulletin 2517, February, 1980, to determine true vapor pressure, unless the Control Officer specifies ASTM Method 2879-83.~~

502.1 Emission Control System: Control efficiency of vapor recovery systems and vapor collection/ processing systems shall be determined according to EPA Method 2A and either EPA Method 25A or 25B. EPA Method 2B also shall be used for vapor incineration devices. When the concentration of non-precursor organic compounds is to be determined, EPA TEST Method 18 shall be used.

502.2 Capture Efficiency: Capture efficiency of an emission control system shall be determined by mass balance in combination with ventilation/draft rate determinations done in accordance with subsection 503.7c or by US EPA Test Methods 204, 204a, 204b, 204c, 204d, 204e, and 204f, Appendix M, 40 CFR 51. This EPA document is available at 1001 North Central Avenue, Phoenix, Arizona, 85004, or call (602) 506-6700 for information.

502.3 Ventilation/draft rates shall be determined by EPA Methods 2, 2a, 2c, and 2d.

502.4 Gaseous Leak Detection And Determination Of Gas-Tight Condition: . Leak tests to verify a gas-tight state of the equipment associated with an emission control system, including the piping outside of the loading area, shall be conducted according to EPA Reference Method 21 (40 CFR 63.423) except that the leak threshold shall be 100 ppmv.

502.5 Reid Vapor Pressure: Reid vapor pressure shall be determined by ASTM Method D323-90 [[ref. So Coast Rule 1149]] or by ASTM Method D-5191

~~504.2~~ **502.6** **Vapor Balance And Loading Systems:** Vapor tightness shall be determined using the method described in ~~Section 501~~ subsection 503.?? of this rule.

502.7 Vapor-tightness in delivery vessels that are not on-loading: A vapor tight condition is determined for vessels that are not onloading by using steps **b** through **g** in subsection 503.??. Step **a** is optional. The validity of testing initiated and performed by the Control Officer for spot checks for equipment leakage is not limited by the degree or fact of observance of the provisions of subsections 503.?? d, e, or f, inasmuch as the Control Officer's failure to observe the requirements of these subsections imposes no increment of responsibility, liability, vulnerability, or burden on a facility or vessel subject to testing :

~~504.3~~ **502.8** TRUE VAPOR PRESSURE SHALL BE DETERMINED BY ~~the most current version of~~ ASTM METHOD 2879~~-83~~ AND BY TEMPERATURE MEASUREMENT UNDER ACTUAL CONDITIONS USING AN INSTRUMENT ACCURATE TO WITHIN ± 1 DEGREE FAHRENHEIT OR ± 0.5 DEGREE CELSIUS. FOR PURPOSES OF RECORDING AND REPORTING, THE REID VAPOR PRESSURE AND THE FOREGOING TEMPERATURE DETERMINATION MAY BE USED IN CONJUNCTION WITH THE METHOD OF AMERICAN PETROLEUM INSTITUTE BULLETIN 2517, FEBRUARY, 1980, TO DETERMINE TRUE VAPOR PRESSURE, EXCEPT WHEN THE CONTROL OFFICER SPECIFIES ASTM METHOD 2879~~-83~~ be used.

~~504.4~~ **502.9** REID VAPOR PRESSURE SHALL BE DETERMINED BY ASTM METHOD D 323-~~82~~*-90* OR BY ASTM METHOD D 5191.

502.10 *Percent of VOC shall be determined either by SCAQMD Method 313 or by BAAQMD Method 31.*

~~502 COMPLIANCE INSPECTIONS: THE CONTROL OFFICER, AT ANY TIME, MAY MONITOR A DELIVERY VESSEL VAPOR COLLECTION SYSTEM, A LOADING RACK'S VAPOR LOSS CONTROL DEVICES, A LOADING FACILITY OR A VAPOR COLLECTION/PROCESSING SYSTEM FOR VAPOR LEAKS BY THE METHODS DESCRIBED IN SECTION 501 OF THIS RULE OR BY APPLICABLE EPA REFERENCE METHODS SPECIFIED IN SECTION 504.~~

~~503 RECORDS RETENTION: RECORDS AND INFORMATION REQUIRED BY THIS RULE SHALL BE RETAINED FOR AT LEAST THREE YEARS.~~

503 Test Methods Adopted by Reference: *The EPA test methods as they exist in the Code of Federal Regulations (CFR) (July 1, 1998), as listed below, are adopted by reference. The other test methods listed here are also adopted by reference, each having paired with it a specific date that identifies the particular version/revision of the method that is adopted*

by reference. These adoptions by reference include no future editions or amendments. Copies of test methods referenced in this Section 503 are available at the Maricopa County Environmental Services Department, 1001 North Central Avenue, Phoenix, AZ, 85004-1942.

503.1 EPA Methods

a. *EPA Methods 2 ("Determination of Stack Gas Velocity and Volumetric Flow Rate"), 2a ("Direct Measurement of Gas Volume Through Pipes and Small Ducts"), 2c ("Determination of Stack Gas Velocity and Volumetric Flow rate in Small Stacks or Ducts"), and 2d ("Measurement of Gas volumetric Flow Rates in Small Pipes and Ducts") All 4 of the foregoing methods are in 40 CFR 60, Appendix A.*

b. *EPA Method 18 ("Measurement of Gaseous Organic Compound Emissions by Gas Chromatography") and its submethods (40 CFR 60, Appendix A).*

c. *EPA* Reference Method 21 (40 CFR 63.423)

d. *EPA Method 25 ("Determination of Total Gaseous Nonmethane Organic Emissions as Carbon") and its submethods (40 CFR 60, Appendix A).*

e. *EPA Test Methods 204 ("Criteria For and Verification Of a Permanent or Temporary Total Enclosure"), 204a, 204b, 204c, 204d, 204e, and 204f (Appendix M, 40 CFR 51).*

503.2 *California's Bay Area Air Quality Management District (BAAQMD) Method 31 (April 15, 1992), "Determination of Volatile Organic Compounds in Paint Strippers, Solvent Cleaners, and Low Solids Coatings".*

503.3 *California's South Coast Air Quality Management District (SCAQMD) Method 313-91 (April 1997).*

[Need to work on getting exact citations for the next 3 entries.]

503.4 ***Vapor Pressure:*** *American Society for Testing and Materials (ASTM) Method D323-90 (1990)[[ref. So Coast Rule 1149]].*

503.5 ***Reid Vapor Pressure:*** *American Society for Testing and Materials (ASTM) Method D-5191 (19??).*

503.6 ~~,~~ ***TRUE VAPOR PRESSURE:*** *ASTM METHOD 2879 (19??).*

~~**501**~~ **503.?? LEAK DETECTION - Test Procedure For Determining The Vapor Tightness Of Loading Equipment:** Vapor tightness of loading equipment shall be determined by this method,: DURING LOADING INTO ~~OR UNLOADING OUT OF~~ A DELIVERY VESSEL, THE PERIPHERIES OF ALL POTENTIAL SOURCES OF LEAKAGE AT THE LOADING FACILITY ARE CHECKED WITH A COMBUSTIBLE GAS DETECTOR OR ORGANIC VAPOR ANALYZER (OVA) AS FOLLOWS:

~~**501.1**~~ **a. PRESSURE:** A PRESSURE TAP SHALL BE PLACED IN THE LOADING FACILITY'S VAPOR CONTROL SYSTEM, AS CLOSE AS POSSIBLE TO THE DELIVERY VESSEL'S TANK. THE PRESSURE SHALL BE RECORDED PERIODICALLY DURING TESTING, AT LEAST ONCE EVERY MINUTE. INSTANTANEOUS MAXIMUM PRESSURE SHALL BE

RECORDED EITHER AUTOMATICALLY OR BY VISUAL OBSERVATION. A PRESSURE MEASUREMENT DEVICE CAPABLE OF MEASURING 20 INCHES (50.8 CM) OF WATER PRESSURE WITH A PRECISION OF 0.1 (2.5 MM) INCH OF WATER SHALL BE CALIBRATED. THIS DEVICE SHALL FIT THE TAP AND SHALL EITHER BE PERMANENTLY INSTALLED OR SHALL BE KEPT AVAILABLE AT ALL TIMES AT THE FACILITY.

~~501.2~~ b. **CALIBRATION:** WITHIN 4 HOURS PRIOR TO MONITORING THE COMBUSTIBLE GAS DETECTOR OR OVA SHALL BE CALIBRATED WITH METHANE AT 10,000 PPM, BY VOLUME..

~~501.3~~ c. **PROBE DISTANCE:** THE PROBE INLET SHALL BE ONE INCH (2.5 CM) OR LESS FROM THE POTENTIAL LEAK SOURCE WHEN SEARCHING FOR LEAKS. THE PROBE INLET SHALL BE ONE INCH (2.5 CM) FROM THE LEAK SOURCE WHEN THE HIGHEST DETECTOR READING IS BEING DETERMINED FOR A DISCOVERED LEAK. WHEN THE PROBE IS OBSTRUCTED FROM MOVING WITHIN ONE INCH (2.5 CM) OF AN ACTUAL OR POTENTIAL LEAK SOURCE, THE CLOSEST PRACTICABLE PROBE DISTANCE SHALL BE USED.

~~501.4~~ d. **PROBE MOVEMENT:** THE PROBE SHALL BE MOVED SLOWLY, NOT FASTER THAN 1.6 INCHES PER SECOND (4 CENTIMETERS PER SECOND). IF THERE IS ANY METER DEFLECTION AT A POTENTIAL OR ACTUAL LEAK SOURCE, THE PROBE SHALL BE POSITIONED TO LOCATE THE POINT OF HIGHEST METER RESPONSE.

~~501.5~~ e. **PROBE POSITION:** THE PROBE INLET SHALL BE POSITIONED IN THE PATH OF THE VAPOR FLOW FROM A LEAK SUCH THAT THE CENTRAL AXIS OF THE PROBE-TUBE INLET SHALL BE POSITIONED COAXIAL WITH THE PATH OF THE MOST CONCENTRATED VAPORS.

~~501.6~~ f. **WIND:** WIND SHALL BE BLOCKED AS MUCH AS POSSIBLE FROM THE SPACE BEING MONITORED. THE ANNUAL LEAK DETECTION TEST REQUIRED OF AN OWNER OR OPERATOR PURSUANT TO SECTION 401 ~~RULE 351~~, SHALL BE VALID ONLY WHEN WIND SPEED IN THE SPACE BEING MONITORED IS 5 MPH OR LESS.

~~501.7~~ **DATA RECORDING:** THE HIGHEST DETECTOR READING AND LOCATION FOR EACH INCIDENCE OF LEAKAGE SHALL BE RECORDED ALONG WITH THE DATE AND TIME.

REGULATION III - CONTROL OF AIR CONTAMINANTS

RULE 351
LOADING OF ORGANIC LIQUIDS

SECTION 100 - GENERAL

101 PURPOSE: To limit emissions of volatile organic compounds from the loading of organic liquids.

102 APPLICABILITY: This rule is applicable to the transfer of organic liquids having a true vapor pressure of 1.5 psia (77.5 mm Hg) or greater under actual loading conditions. It regulates transfers at bulk terminals and bulk plants from stationary storage tanks to delivery vessels and from delivery vessels to stationary storage tanks.

SECTION 200 - DEFINITIONS:

For the purpose of this rule, the following definitions shall apply:

201 BULK PLANT - Any loading facility at which gasoline and/or other organic liquids with a true vapor pressure of 1.5 psia (77.5 mm Hg) or greater under any actual storage conditions are received from delivery vessels for storage in on-site stationary tanks, and from which such liquids also are transferred to delivery vessels.

202 BULK TANK - Any stationary storage tank serving a loading rack which loads delivery vessels with organic liquids.

203 BULK TERMINAL - Any primary distributing loading facility which has ever received in any consecutive 30 day period over 600,000 gallons (2,271,180 L) of gasoline and/or other organic liquids with a true vapor pressure of 1.5 psia (77.5 mm Hg) or greater under actual storage conditions; or any loading facility where delivery of such liquids to the facility is primarily by pipeline.

204 DELIVERY VESSEL - Any vehicular-mounted container such as a railroad tank car, tanker truck, tank trailer or any other mobile container used to transport organic liquids.

205 DISPENSING TANK - Any stationary tank which dispenses organic liquid fuel directly into the fuel tanks of motor vehicles including aircraft.

206 EXCESS ORGANIC LIQUID DRAINAGE - More than 10 milliliters (0.34 fluid ounces) per disconnect.

207 FUGITIVE LIQUID LEAK - An organic liquid leak of more than three drops per minute from any single leak source other than the disconnect operation of liquid fill line and vapor line.

208 GAS TIGHT - Having no leak of gaseous organic compound(s) exceeding 10,000 ppm above background when measurements are made using EPA Method 21 with a methane calibration standard.

209 GASOLINE - Any petroleum distillate, petroleum distillate/alcohol blend, petroleum distillate/organic compound blend, or alcohol having a true vapor pressure of 1.5 psia (77.5 mm Hg) or greater under any actual conditions of storage and handling, and which is used as a fuel for internal combustion engines.

210 GASOLINE DISPENSING OPERATION - All gasoline dispensing tanks and associated equipment located on one or more contiguous or adjacent properties under the control of the same person or persons under common control.

211 LOADING FACILITY - Any operation or facility such as a gasoline storage tank farm, pipeline terminal, bulk plant, or loading dock or combination thereof, where organic liquids are transferred or loaded into or out of delivery vessels for future distribution. Included are all related pollutant-emitting activities which are located on one or more contiguous or adjacent properties, and are under the control of the same person or persons under common control.

212 OFFSET FILL LINE - Any organic liquid fill line (piping and fittings) which contains one or more bends.

213 ORGANIC LIQUID - Any organic compound which exists as a liquid under any actual conditions of use, transport or storage.

214 STATIONARY STORAGE TANK - Any tank, reservoir or other container used to store, but not transport, organic liquids.

215 SUBMERGED FILL PIPE - Any discharge pipe or nozzle which meets the applicable specification as follows:

215.1 Top Filled Or Bottom Filled Tanks: The end of the discharge pipe or nozzle is totally submerged when the liquid level is six inches (15 cm) from the bottom of the tank.

215.2 SIDE-FILLED: THE END OF THE DISCHARGE PIPE OR NOZZLE IS TOTALLY SUBMERGED WHEN THE LIQUID LEVEL IS 18 INCHES (46 CM) FROM THE BOTTOM OF THE TANK.

216 SWITCH LOADING - LOADING DIESEL FUEL INTO A DELIVERY VESSEL WHOSE PREVIOUS LOAD WAS GASOLINE; OR LOADING ANY ORGANIC LIQUID NOT SUBJECT TO THIS RULE INTO A DELIVERY VESSEL WHOSE PREVIOUS LOAD WAS AN ORGANIC LIQUID SUBJECT TO THIS RULE.

217 TRUE VAPOR PRESSURE (TVP) - ABSOLUTE VAPOR PRESSURE OF A LIQUID AT ITS EXISTING TEMPERATURE OF STORAGE AND/OR HANDLING.

218 VAPOR COLLECTION/PROCESSING SYSTEM - A VAPOR LOSS CONTROL DEVICE CONSISTING OF A VAPOR GATHERING SUBSYSTEM CAPABLE OF COLLECTING THE ORGANIC VAPORS AND ORGANIC GASES PLUS A SECOND SUBSYSTEM CAPABLE OF PROCESSING SUCH VAPORS AND GASES, PREVENTING AT LEAST 95 PERCENT OF THE VOLATILE ORGANIC COMPOUNDS ENTERING IT FROM ENTERING THE ATMOSPHERE.

219 VAPOR LOSS CONTROL DEVICE - ANY PIPING, HOSES, EQUIPMENT, AND DEVICES WHICH ARE USED TO COLLECT, STORE AND/OR PROCESS ORGANIC VAPORS AT A BULK TERMINAL, BULK PLANT, SERVICE STATION OR OTHER OPERATION HANDLING GASOLINE AND/OR OTHER ORGANIC LIQUIDS.

220 VAPOR TIGHT - A CONDITION WHERE NO ORGANIC VAPOR LEAK REACHES OR EXCEEDS 100 PERCENT OF THE LOWER EXPLOSIVE LIMIT AT A DISTANCE OF ONE INCH (2.5 CM) FROM A LEAK WHEN MEASURED WITH A COMBUSTIBLE GAS DETECTOR OR AN ORGANIC VAPOR ANALYZER, BOTH CALIBRATED WITH PROPANE.

SECTION 300 - STANDARDS

301 GENERAL REQUIREMENTS FOR LOADING FACILITIES: ALL BULK TERMINALS AND PLANTS MUST HAVE SUBMERGED FILL PIPES IN ALL TANKS OVER 250 GALLONS (946 L) STORING ORGANIC LIQUIDS, OBSERVE DESIGNATED PROCEDURES AND BE EQUIPPED WITH APPLICABLE EQUIPMENT AS FOLLOWS:

301.1 BULK TERMINALS: NO PERSON SHALL LOAD ORGANIC LIQUIDS HAVING A TVP OF 1.5 PSIA (77.5 MM HG) OR GREATER INTO ANY DELIVERY VESSEL FROM A STATIONARY STORAGE TANK AT A BULK TERMINAL UNLESS THE VESSEL BEARS A CURRENT PRESSURE-TEST DECAL ISSUED BY THE CONTROL OFFICER AND THE TERMINAL USES A VAPOR COLLECTION/PROCESSING SYSTEM WHICH REDUCES THE EMISSIONS OF VOLATILE ORGANIC COMPOUNDS TO NOT MORE THAN .08 POUNDS PER 1000 GALLONS OF SUCH LIQUIDS TRANSFERRED (10 GRAMS PER 1000 LITERS). SWITCH LOADING SHALL BE SUBJECT TO THIS STANDARD. THE TERMINAL OWNER OR OPERATOR AND THE OPERATOR OF THE RECEIVING VESSEL SHALL ACT TO ENSURE THAT THE VAPOR LINE IS CONNECTED BEFORE SUCH LIQUIDS ARE TRANSFERRED.

301.2 BULK PLANT TANKS OVER 250 GALLONS (>946 L):

A. **TRANSFER TO BULK PLANT TANKS:** NO PERSON SHALL TRANSFER GASOLINE FROM A DELIVERY VESSEL INTO A BULK PLANT TANK EXCEEDING 250 GALLONS (946 L) CAPACITY UNLESS THE DELIVERY VESSEL BEARS A CURRENT COUNTY PRESSURE-TEST DECAL AND USES A VAPOR BALANCE SYSTEM EQUIPPED WITH FITTINGS WHICH ARE VAPOR TIGHT; OR, ALTERNATIVELY, A VAPOR LOSS CONTROL SYSTEM IS USED WHICH EMITS TO ATMOSPHERE LESS THAN 0.6 POUND OF VOLATILE ORGANIC COMPOUNDS PER 1000 GALLONS TRANSFERRED (72 GRAMS PER 1000 LITERS).

B. **LOADING FROM BULK PLANT TANKS:** NO PERSON SHALL TRANSFER GASOLINE FROM A BULK PLANT TANK EXCEEDING 250 GALLONS (946 L) INTO A DELIVERY VESSEL UNLESS BOTH THE LOADING RACK AND DELIVERY VESSEL USE A VAPOR BALANCE SYSTEM EQUIPPED WITH FITTINGS WHICH ARE VAPOR TIGHT; OR, ALTERNATIVELY, A S USED WHICH EMITS TO ATMOSPHERE LESS THAN 0.6 POUNDS OF VOLATILE ORGANIC COMPOUNDS PER 1000 GALLONS LOADED (72 GRAMS PER 1000 LITERS).

302 OPERATING REQUIREMENTS FOR VAPOR LOSS CONTROL DEVICES: THE OWNER OR OPERATOR OF A VAPOR LOSS CONTROL DEVICE SUBJECT TO THIS RULE SHALL OPERATE THE DEVICE AND ORGANIC LIQUID TRANSFER EQUIPMENT AS FOLLOWS:

302.1 LOADING SHALL BE ACCOMPLISHED IN A MANNER THAT PREVENTS GAUGE PRESSURE FROM EXCEEDING 18 INCHES OF WATER (33.6 MM HG) AND VACUUM FROM EXCEEDING SIX INCHES OF WATER (11.2 MM HG) IN THE TANK TRUCK. EACH OWNER OR OPERATOR OF A FACILITY SHALL ACT TO ENSURE THAT ANY VAPOR RECOVERY SYSTEM REQUIRED BY THIS RULE 351 IS CONNECTED BETWEEN THE DELIVERY VESSEL AND THE STORAGE TANK DURING ALL ORGANIC LIQUID TRANSFERS.

302.2 LOADING SHALL BE ACCOMPLISHED IN A MANNER THAT PREVENTS OVERFILLS, FUGITIVE LIQUID LEAKS OR EXCESS ORGANIC LIQUID DRAINAGE. OWNERS OR OPERATORS OF BULK PLANTS OR OPERATORS OF DELIVERY VESSELS SHALL OBSERVE ALL PARTS OF THE TRANSFER AND SHALL DISCONTINUE TRANSFER IF ANY LEAKS ARE OBSERVED. MEASURES SHALL BE TAKEN TO PREVENT LIQUID LEAKS FROM THE LOADING DEVICE WHEN IT IS NOT IN USE, AND TO

COMPLETE DRAINAGE BEFORE THE LOADING DEVICE IS DISCONNECTED. DURING LOADING OR UNLOADING OPERATIONS, POTENTIAL LEAK SOURCES SHALL BE VAPOR TIGHT AS DEMONSTRATED BY THE TEST PROCEDURE DESCRIBED IN SECTION 501 OF THIS RULE.

302.3 LOADING OPERATIONS WHICH USE VAPOR COLLECTION/PROCESSING EQUIPMENT SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT THE DISPLACED VAPOR AND AIR WILL BE VENTED ONLY TO THE VAPOR COLLECTION/PROCESSING SYSTEM, WHICH SHALL BE OPERATED GAS-TIGHT AND IN A MANNER SUCH THAT THE VAPOR PROCESSING CAPACITY IS NOT EXCEEDED. DIAPHRAGMS USED IN VAPOR STORAGE TANKS SHALL BE MAINTAINED GAS-TIGHT.

302.4 VAPOR TRANSFER LINES SHALL BE EQUIPPED WITH FITTINGS THAT ARE VAPOR TIGHT AND THAT AUTOMATICALLY AND IMMEDIATELY CLOSE UPON DISCONNECTION. VAPOR BALANCE SYSTEMS SHALL BE DESIGNED TO PREVENT ANY VAPORS COLLECTED AT ONE LOADING RACK FROM PASSING TO ANOTHER LOADING RACK.

303 REPAIR AND RETESTING REQUIREMENT: EXCEPT AS SUPERSEDED BY DIVISION ACTIONS PURSUANT TO THE PROCEDURES OF RULE 100, SECTION 501 ("MALFUNCTIONS"), THE OWNER/OPERATOR OF A VAPOR LOSS CONTROL DEVICE THAT EXCEEDS THE STANDARDS OF THIS RULE SHALL NOTIFY THE CONTROL OFFICER AND OBSERVE THE FOLLOWING TIME SCHEDULE IN ENDING SUCH EXCEEDANCES:

303.1 CONCENTRATIONS AT OR ABOVE THE LOWER EXPLOSIVE LIMIT MUST BE BROUGHT INTO COMPLIANCE WITHIN 24 HOURS OF DETECTION.

303.2 LEAK CONCENTRATIONS EXCEEDING 10,000 PPM BUT LESS THAN 50,000 PPM AS METHANE FOR VAPOR COLLECTION/PROCESSING EQUIPMENT SUBJECT TO GAS-TIGHT STANDARD SHALL BE BROUGHT INTO COMPLIANCE WITHIN 5 DAYS OF DETECTION.

303.3 EXCEPT AS THE CONTROL OFFICER OTHERWISE SPECIFIES, A LEAK SOURCE SUBJECT TO SECTIONS 303.1 OR 303.2 MUST BE TESTED AFTER PRESUMED LEAK-CORRECTION WITHIN 15 MINUTES OF RECOMMENCING USE; IF LEAK STANDARDS ARE EXCEEDED IN THIS TEST, THE USE OF THE FAULTY EQUIPMENT SHALL BE DISCONTINUED WITHIN 15 MINUTES UNTIL CORRECTION IS VERIFIED BY RETESTING.

304 EQUIPMENT MAINTENANCE AND OPERATING PRACTICES: ALL EQUIPMENT ASSOCIATED WITH DELIVERY AND LOADING OPERATIONS SHALL BE MAINTAINED TO BE LEAK FREE, VAPOR TIGHT AND IN GOOD WORKING ORDER. GASOLINE SHALL NOT BE SPILLED, DISCARDED IN SEWERS, STORED IN OPEN CONTAINERS, OR HANDLED IN ANY OTHER MANNER THAT WOULD RESULT IN EVAPORATION TO THE ATMOSPHERE. PURGING OF GASOLINE VAPORS AND OF JP-4 (JET PETROL) VAPORS IS PROHIBITED.

305 EXEMPTIONS:

305.1 LESS THAN 120,000 GALLONS PER 30-DAY PERIOD: AT BULK PLANTS BUILT BEFORE OCTOBER 2, 1978, VAPOR LOSS CONTROL SPECIFIED IN SECTION 301.2B IS NOT REQUIRED AT THE OUTLOADING RACK WHEN ALL OF THE FOLLOWING ARE COMPLIED WITH:

- **A.** AFTER APRIL 6, 1992, THE BULK PLANT LOADS LESS THAN 120,000 GALLONS (454,800 L) OF GASOLINE INTO DELIVERY VESSELS IN ANY CONSECUTIVE 30-DAY PERIOD. ANY PLANT THAT BECOMES SUBJECT TO ALL OF THE PROVISIONS OF SECTION 301.2B BY EXCEEDING THIS THRESHOLD WILL REMAIN SUBJECT TO THESE PROVISIONS EVEN IF ITS OUTPUT LATER FALLS BELOW THE THRESHOLD.
- **B.** KEEP CURRENT RECORDS OF AMOUNT OF GASOLINE LOADED AND KEEP THEM READILY ACCESSIBLE TO THE DIVISION UPON REQUEST FOR AT LEAST THREE (3) YEARS.
- **C.** LOAD OUTGOING GASOLINE USING SUBMERGED FILL ONLY.
- **D.** THE OWNERS OR OPERATORS OF THE BULK PLANT OR THE OWNERS OR OPERATORS OF THE DELIVERY VESSEL SHALL OBSERVE ALL PARTS OF THE TRANSFER AND SHALL DISCONTINUE THE TRANSFER IF ANY LEAKS ARE OBSERVED.

305.2 OPENING HATCHES: WHEN VOC VAPORS FROM ORGANIC LIQUIDS ARE PRESENT WITHIN A NON-EXEMPT DELIVERY VESSEL, AUTHORIZED GOVERNMENT AGENTS AS WELL AS OWNERS/OPERATORS AND THEIR CONTRACTORS MAY OPEN VAPOR CONTAINMENT EQUIPMENT WHILE PERFORMING OPERATIONS REQUIRED BY DIVISION RULES OR BY OTHER STATUTORY ENTITIES, BUT SHALL BE RESTRICTED AS FOLLOWS UNLESS APPROVED IN ADVANCE BY THE CONTROL OFFICER:

- **A.** WAIT AT LEAST 3 MINUTES AFTER ONLOADING IS COMPLETE OR DELIVERY VESSEL HAS STOPPED BEFORE OPENING HATCH OR OTHER VAPOR SEAL.
- **B.** RECLOSE HATCH OR OTHER SEALING DEVICE WITHIN 3 MINUTES OF OPENING.
- **C.** LIMIT WINDSPEED AT OPENED HATCH OR OTHER OPENED SEALING DEVICE TO NOT MORE THAN 3 MPH (1.34 M/SEC).

SECTION 400 - ADMINISTRATIVE REQUIREMENTS

401 EQUIPMENT LEAKS:

401.1 THE OWNER OR OPERATOR SHALL ALSO PERFORM MONTHLY INSPECTIONS, WHILE VAPOR IS BEING TRANSFERRED, FOR LIQUID AND VAPOR LEAKS AND FOR FAULTY EQUIPMENT. IN THESE MONTHLY INSPECTIONS DETECTION METHODS INCORPORATING SIGHT, SOUND, SMELL AND/OR TOUCH MAY BE USED.

402 COMPLIANCE SCHEDULE: By September 30, 1995, the owner or operator of any loading facility which requires modification subject to a requirement of Section 300 of this rule shall submit to the Control Officer for approval an emission control plan and a schedule for achieving compliance with all requirements by April 30, 1996. The plan shall specify the date of completion of each major step leading to compliance.

SECTION 500 - MONITORING AND RECORDS

501 LEAK DETECTION - TEST PROCEDURE: During loading into or unloading out of delivery vessels, the peripheries of all potential sources of leakage at the loading facility are checked with a combustible gas detector or organic vapor analyzer (OVA) as follows:

501.1 PRESSURE: A pressure tap shall be placed in the loading facility's vapor control system, as close as possible to the delivery vessel's tank. The pressure shall be recorded periodically during testing, at least once every minute. Instantaneous maximum pressure shall be recorded either automatically or by visual observation. A pressure measurement device capable of measuring 20 inches (50.8 cm) of water pressure with a precision of 0.1 (2.5 mm) inch of water shall be calibrated. This device shall fit the tap and shall either be permanently installed or shall be kept available at all times at the facility.

501.2 CALIBRATION: Within 4 hours prior to monitoring the combustible gas detector or OVA shall be calibrated with 10,600 ppm propane by volume in air for a 50 percent lower explosive limit (LEL) response.

501.3 PROBE DISTANCE: The probe inlet shall be one inch (2.5 cm) or less from the potential leak source when searching for leaks. The probe inlet shall be one inch (2.5 cm) from the leak source when the highest detector reading is being determined for a discovered leak. When the probe is obstructed from moving within one inch (2.5 cm) of an actual or potential leak source, the closest practicable probe distance shall be used.

501.4 PROBE MOVEMENT: The probe shall be moved slowly, not faster than 1.6 inches per second (4 centimeters per second). If there is any meter deflection at a potential or actual leak source, the probe shall be positioned to locate the point of highest meter response.

501.5 PROBE POSITION: The probe inlet shall be positioned in the path of the vapor flow from a leak such that the central axis of the probe tube inlet shall be positioned coaxial with the path of the most concentrated vapors.

501.6 WIND: Wind shall be blocked as much as possible from the space being monitored. The annual leak detection test required by Section 401 shall be valid only when wind speed in the space being monitored is 5 mph or less.

501.7 DATA RECORDING: The highest detector reading and location for each incidence of leakage shall be recorded along with the date and time.

502 COMPLIANCE INSPECTIONS: The Control Officer, at any time, may monitor a delivery vessel vapor collection system, a loading rack's vapor loss control devices, a loading facility or a vapor collection/processing system for vapor leaks by the methods described in Section 501 of this rule or by applicable EPA Reference Methods specified in Section 504.

503 RECORDS RETENTION: Records and information required by this rule shall be retained for at least three years.

504 COMPLIANCE DETERMINATION - TEST METHODS: When more than one test method is permitted for a determination, an exceedance of the limits established in this rule determined by any of the applicable test methods constitutes a violation of this rule.

504.1 VAPOR COLLECTION/PROCESSING SYSTEM: Control efficiency of a vapor collection/processing system shall be determined according to EPA Reference Method 25A or Method 25B subsequent to the Control Officer's approval of the test protocol. Leak tests to verify a gas-tight state of the equipment associated with the vapor collection/processing device, including the piping outside of the loading area, shall be conducted according to EPA Reference Method 21. Gas volume flow rates shall be determined by Method 2B for a thermal oxidizer; otherwise, by Method 2A.

504.2 VAPOR BALANCE AND LOADING SYSTEMS: Vapor tightness shall be determined using the method described in Section 501 of this rule.

504.3 True Vapor Pressure shall be determined by ASTM Method 2879-83 and by temperature measurement under actual conditions using an instrument accurate to within ±1 degree Fahrenheit or ±0.5 degree Celsius. For purposes of recording and reporting, the Reid vapor pressure and the foregoing temperature determination may be used in conjunction with the method of American Petroleum Institute Bulletin 2517, February, 1980, to determine true vapor pressure, unless the Control Officer specifies ASTM Method 2879-83.

504.4 Reid Vapor Pressure shall be determined by ASTM Method D 323-82 or by ASTM Method D 5191.